

***PSEUDOTSUGA MENZIESII* / *CORYLUS CORNUTA* –  
*SYMPHORICARPOS (ALBUS, HESPERIUS)* /  
*POLYSTICHUM MUNITUM***

Douglas-fir / beaked hazelnut – snowberry / sword fern

Abbreviated Name: PSME/COCO-SYMPH/POMU

Synonym: *Pseudotsuga menziesii* / *Corylus cornuta* –  
*Symphoricarpos (albus, mollis)* / *Polystichum munitum*

Sample size = 34 plots

**DISTRIBUTION:** This association occurs primarily from western Pierce County and central Mason County south in the Puget Trough and into the Willamette Valley and its foothills in Oregon. It rarely occurs elsewhere in the Puget Trough (e.g., one plot from Whatcom County). Occurs mostly in Pierce, Thurston, Mason, Lewis, Cowlitz, and Clark counties.

**GLOBAL/STATE STATUS:** GNR2. There are few relatively high-quality occurrences (4 are known) and they are relatively small. Almost all occurrences have been significantly degraded by logging or non-native species, or have resulted from fire suppression. Development and non-native species are threats. There is uncertainty about the pre-settlement abundance of this type because of the combination of losses from development and increases with fire suppression.

**ID TIPS:** Dominated by Douglas-fir, with little to no western hemlock, western redcedar, or grand fir present. Beaked hazelnut and snowberry species almost always present, the two together typically >10% cover. Sword fern >5% cover. See key.

**ENVIRONMENT:** These sites are moderately dry to mesic and appear to be relatively nutrient-rich. Sites are flat to moderately sloping (rarely steep), with varying aspect. Most plots are on glacial outwash plains or upper to mid slopes. Parent materials include gravelly glacial outwash, old lacustrine and alluvial sediments, and old volcanic residuum. Soil texture ranges from gravelly loamy sand to stony clay loam. Coarse fragments are often but not always abundant. All mapped soil types are free of restrictive layers.

**Precipitation:** 41-70 inches (mean 45)

**Elevation:** 40-650 feet

**Aspect/slope:** various/ 0-65% (mean 24)

**Slope position:** plain, upper, mid, ridgetop, short, lower

**Soil series:** Spanaway, Everett, Fitch, Olympic, Dystric xerochrepts, Oval, Seaquest, Hesson, Xerochrepts, Schneider

**DISTURBANCE/SUCCESSION:** Fire is the primary natural disturbance. Old-growth stands show evidence of past low- to moderate-severity fire (underburns). Many stands grow on soils that formerly

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**Vegetation Composition Table (selected species):**

Con = constancy, the percent of plots within which each species was found;  
Cov = cover, the mean crown cover of the species in plots where it was found;  
+ = trace (< 0.5% cover).

| Trees                          | Kartesz 2005 Name                    | Con | Cov |
|--------------------------------|--------------------------------------|-----|-----|
| Douglas-fir                    | Pseudotsuga menziesii var. menziesii | 100 | 74  |
| bigleaf maple                  | Acer macrophyllum                    | 65  | 21  |
| cascara                        | Frangula purshiana                   | 35  | +   |
| <b>Shrubs and Dwarf-shrubs</b> |                                      |     |     |
| trailing blackberry            | Rubus ursinus ssp. macropetalus      | 97  | 20  |
| beaked hazelnut                | Corylus cornuta var. californica     | 94  | 24  |
| baldhip rose                   | Rosa gymnocarpa                      | 88  | 2   |
| orange honeysuckle             | Lonicera ciliosa                     | 79  | 5   |
| common snowberry               | Symphoricarpos albus var. laevigatus | 76  | 9   |
| spreading snowberry            | Symphoricarpos hesperius             | 71  | 8   |
| oceanspray                     | Holodiscus discolor                  | 71  | 6   |
| Indian plum                    | Oemleria cerasiformis                | 71  | 4   |
| dwarf Oregongrape              | Mahonia nervosa                      | 68  | 21  |
| serviceberry                   | Amelanchier alnifolia                | 65  | 2   |
| tall Oregongrape               | Mahonia aquifolium                   | 62  | 1   |
| red huckleberry                | Vaccinium parvifolium                | 56  | 3   |
| salal                          | Gaultheria shallon                   | 44  | 5   |
| vine maple                     | Acer circinatum                      | 38  | 21  |
| <b>Graminoids</b>              |                                      |     |     |
| Columbia brome                 | Bromus vulgaris                      | 79  | 4   |
| Coast Range fescue             | Festuca subuliflora                  | 68  | 2   |
| <b>Forbs and Ferns</b>         |                                      |     |     |
| sword fern                     | Polystichum munitum                  | 100 | 17  |
| sweet-scented bedstraw         | Galium triflorum                     | 100 | 3   |
| western starflower             | Trientalis borealis ssp. latifolia   | 91  | 2   |
| twinline                       | Linnaea borealis ssp. longiflora     | 65  | 8   |
| pathfinder                     | Adenocaulon bicolor                  | 56  | 1   |
| bracken fern                   | Pteridium aquilinum var. pubescens   | 50  | 4   |
| starry false Solomon's-seal    | Maianthemum stellatum                | 50  | 2   |
| cleavers                       | Galium aparine                       | 50  | 2   |
| Hooker's fairybells            | Prosartes hookeri var. oregana       | 47  | 1   |
| woods strawberry               | Fragaria vesca ssp. bracteata        | 47  | 1   |
| western trillium               | Trillium ovatum ssp. ovatum          | 47  | +   |
| inside-out flower              | Vancouveria hexandra                 | 44  | 11  |
| mountain sweet-cicely          | Osmorhiza berteroi                   | 44  | 1   |
| yerba buena                    | Clinopodium douglasii                | 38  | 2   |
| big-leaved sandwort            | Moehringia macrophylla               | 35  | 2   |

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supported prairies (Spanaway series) but have been invaded by trees. Most stands are located in landscapes that formerly supported prairies maintained by Native American burning practices. It is possible that some of these stands could support more shade-tolerant conifers in the absence of long-term disturbance. The high mean cover of trailing blackberry, an increaser with ground disturbance, in our plots is probably due to the fact that a majority of the plots were from stands that had been disturbed by thinning activities and/or military training on Fort Lewis.

**VEGETATION:** Canopy dominated by Douglas-fir. Bigleaf maple usually forms a prominent to co-dominant lower tree canopy layer. Douglas-fir is sometimes regenerating under its own canopy in these stands. Beaked hazelnut almost always forms a prominent to dominant tall shrub layer, occasionally mixed with co-dominant vine maple and usually with presence of oceanspray. Lower shrub layers are often dominated or co-dominated by trailing blackberry (an increaser with disturbance), spreading snowberry, common snowberry, and/or dwarf Oregongrape. Other frequent shrubs and vines are orange honeysuckle, Indian plum, baldhip rose, serviceberry, and tall Oregongrape. Sword fern is always prominent to dominant in the herb layer. Sweet-scented bedstraw, western starflower, Columbia brome, Coast Range fescue, twinflower, and pathfinder are frequently occurring herbs. Inside-out flower is sometimes prominent.

**CLASSIFICATION NOTES:** Described by Chappell (1997, 2001) as part of PSME-(ABGR)/COCO/POMU. NatureServe (2005) lists it as a part of PSME/COCO/POMU, but this classification will soon be revised to recognize it as a unique type.

**MANAGEMENT NOTES:** These sites appear to be moderately productive for tree growth. Stands previously disturbed or resultant from fire suppression are good candidates for selective logging techniques. Non-native English ivy (*Hedera helix*) does well on these sites and if present can quickly overwhelm the native understory. Herb Robert (*Geranium robertianum*) is another threatening invasive for this association.

**BIODIVERSITY NOTES:** This association, because of its local abundance and close association with southern Puget Sound prairies and oak woodlands, is undoubtedly part of the habitat of the state threatened western gray squirrel (*Sciurus griseus*), which requires conifers in close proximity to oak and water.

Chappell, C.B. 2006. Upland plant associations of the Puget Trough ecoregion, Washington. Washington Department of Natural Resources, Natural Heritage Program, Olympia, WA. [\[http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf\]](http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf).

